

Portland State University

PDXScholar

Engineering and Technology Management
Student Projects

Engineering and Technology Management

Winter 2021

Strategic Analysis of Mirror: The Gym

Neeti Verma

Portland State University

Follow this and additional works at: https://pdxscholar.library.pdx.edu/etm_studentprojects



Part of the [Business Analytics Commons](#), and the [Technology and Innovation Commons](#)

Let us know how access to this document benefits you.

Citation Details

Verma, Neeti, "Strategic Analysis of Mirror: The Gym" (2021). *Engineering and Technology Management Student Projects*. 2305.

https://pdxscholar.library.pdx.edu/etm_studentprojects/2305

This Project is brought to you for free and open access. It has been accepted for inclusion in Engineering and Technology Management Student Projects by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.



Strategic Analysis of Mirror: The nearly invisible home gym

Course Title: Strategic Management of Technology

Course Number: ETM 526

Instructor: Dr. Charles Weber

Term: Winter

Year: 2021

Author(s): Neeti Verma

ETM OFFICE USE ONLY

Report No.:

Type: Student Project

Note:

Table of Contents

Table of Contents	2
Introduction	3
Mirror	4
Technology adoption lifecycle	5
Competitive Landscape	6
Tempo	9
Tonal	10
NordicTrack	10
Hydrow Rower	13
Ergatta	13
FightCamp Gym	14
JaxJox Kettlebell Connect.....	15
Peloton	16
Pro-form	16
Porter's Five Forces	17
Power of Buyers	18
Power of Suppliers.....	18
Threat of new entrant.....	18
Threat of substitution	18
Intensity of competitive rivalry	19
Conclusion.....	19
References	21
Appendices.....	25
Appendix A: Global home fitness equipment market report [2020-2024]	25
Appendix B: Global Interactive fitness market [2020-2024]	26
Appendix C: CDC data on physical activity.....	27
Appendix D: Government flyer to promote physical activity	29
Appendix E: Gym equipment manufacturer	31
Appendix F: Increased Sales of home gym equipment in 2020.....	32
Appendix G: Global market size of home fitness equipment	32

Abstract

The home gym equipment market has many local and global manufacturers competing for a higher market share. The market for gym equipment has traditionally been composed of commercial fitness facilities, hotels, and offices. The home equipment market has been rising amid COVID-19 pandemic. There have been a few new entrants with high technology in the home gym equipment market.

This paper looks at one such company and performs a strategic analysis of its product and would analyze the strategies used by the company to gain market share, performs external on the industry, and tries to propose a path forward for the company to gain and maintain a dominant market position.

Introduction

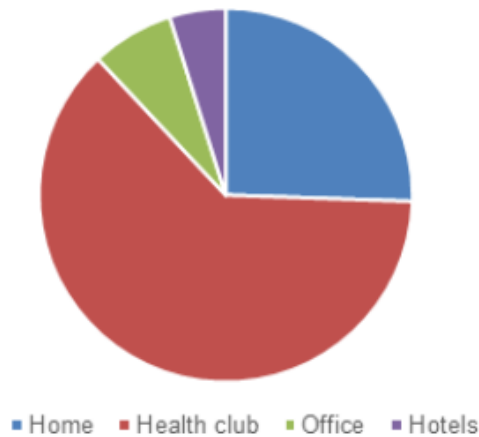
The home gym equipment market is very competitive with a lot of players and a thriving substitution threat from a traditional gym/club. The home gym equipment industry is witnessing high growth opportunity during 2020 due to COVID-19 pandemic which is likely to continue with a 9% CAGR during 2020-2025.^{[1][25]} There is enough scientific evidence to support that moderate-to-vigorous physical activity helps improve physical, functional and mental wellbeing.^[4] There is also an overall increase in the effort by government to increase awareness of the health benefits of physical activity.^{[2][3]}

After the success of athletic leisure wear and fitness wearables, we have seen an increase in popularity of smart and connected exercise equipment. Advancements in technology along with social distancing mandates due to COVID-19 pandemic have led to an increase in the high technology internet connected home gym equipment. High cost of gym and club memberships have been compelling consumers to buy high technology connected machines for home use. Rising purchasing power of consumers as well as increase in financing options allows consumers to bear the expense of the initial investment.^[16]

Home gym equipment can broadly be categorized into 2 categories: *cardiovascular equipment* that help raise heartrate like treadmill, elliptical, stationary bikes etc. or *strength equipment* that help build and strengthen muscles like free weights, dumbbell, extension machines etc.^[5] The home gym market growth has accelerated with the onset of the pandemic due to risk of contracting the virus in indoor facilities and restrictions in most states in US. The global home fitness equipment market size is projected to grow by USD 657.43 million during 2020-2024, progressing at a CAGR of over 3% throughout the forecast period, according to the latest report by Technavio.^[6]

This paper explores if the Mirror, a high technology home gym equipment, has strategic advantage in a highly competitive health and fitness market.

U.S. fitness equipment market, by end-use, 2019 (Thousand Units)



Source: www.gminsights.com

Image: gminsights website

Mirror

Mirror was founded by Brynn Putnam, a Harvard educated professional ballet dancer and founder of Refine Method fitness studio in New York. Mirror is a high-tech home fitness product that brings boutique studio style gym experience in home for its customers. As described on their website, when off, Mirror is a full-length mirror. When on, user see themselves, instructor, and class takers in an interactive display. Mirror has an embedded camera and built-in speakers.^[7]

Mirror allows users to access a wide variety of workouts of varying difficulty levels and lengths of time on demand. Users can choose to attend a regularly scheduled live class or seek personalized 1:1 training session with experts. The Users are face-to-face with the instructor and can see their entire body as well as a shrunk image of the instructor making it easier to assess and copy exercise form. The device can be turned on/off by a button on the device or through a phone application. Their proprietary algorithm uses the data collected during workouts, user goals, preferences, and personal profile to makes recommendations and adjustments to workout sessions. The startup, had raised more than \$70 million from Steve Cohen's venture capital fund, Spark Capital, and other backers before being acquired by Lululemon in 2020 for \$500 million.^[15]



Image: Mirror website

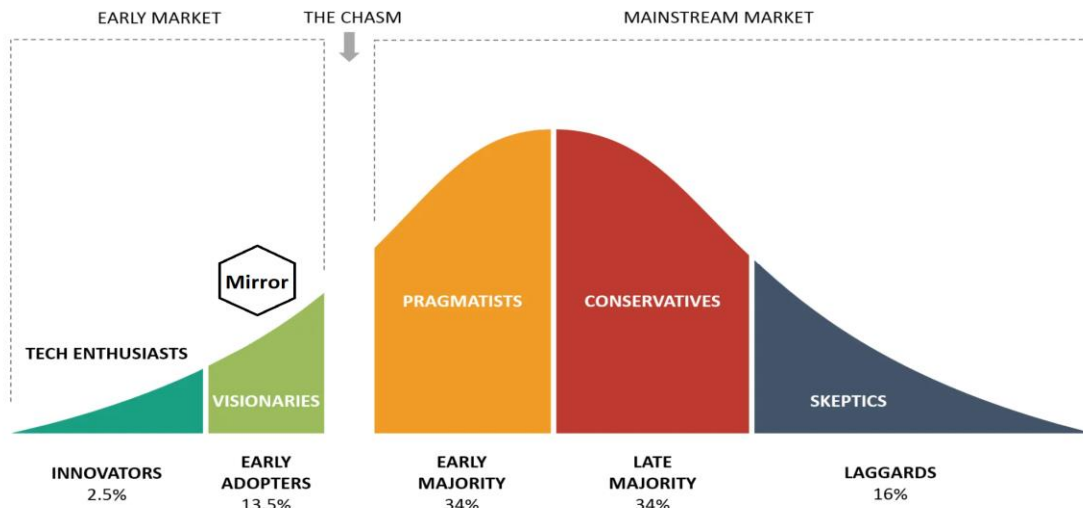
Technology adoption lifecycle

The home gym equipment market is one of the industries that has evolved a lot over past 40 years and is still showing strong growth.^[8] Gym equipment market is a very competitive market with many players. Traditionally the home gym equipment market was dominated by treadmills and free weights. In recent times, platforms that integrate sports equipment with coaching software have been witnessing significant demand among sports enthusiasts and athletes across the globe.^{[16][47]}



Image: Virtual/Online Fitness Market Size & Share | Global Report 2026

Mirror was launched in September 2018 and had tens of thousands of subscribers by mid-2020.^[9] Mirror is in the early adopters' phase of technology lifecycle with a few celebrity early adopters like; Alicia Keys, Reese Witherspoon, Ellen DeGeneres, Allison Williams, Gwyneth Paltrow, Jennifer Aniston and Kate Hudson.^[10] Mirror was featured on the social media of these celebrities which helped Mirror gain word of mouth publicity, press coverage and brand recognition. Some luxury hotels have also installed Mirrors in their suites enabling more users in the target market segment to try the device.



Base Image: business-to-you website

Mirror device has a 40" full HD 1080p display, with 178° wide viewing angle and 5 MP front facing camera. It comes with a digital application that helps users control the device. Mirror is one of the new high technology entrants which offer on-demand streaming of exercise classes. Mirror is competitively priced in the high technology fitness segment at \$1495 and offers financing options. Mirror needs mirror membership to access the live and on-demand workouts at \$39/month.

Competitive Landscape

The home gym equipment market has many traditional gym equipment as well a bunch of new high technology gym equipment entrants. The traditional gym equipment manufacturers have a majority share not only in the commercial gym equipment segment but also have a dominant market share in home gym equipment segment.

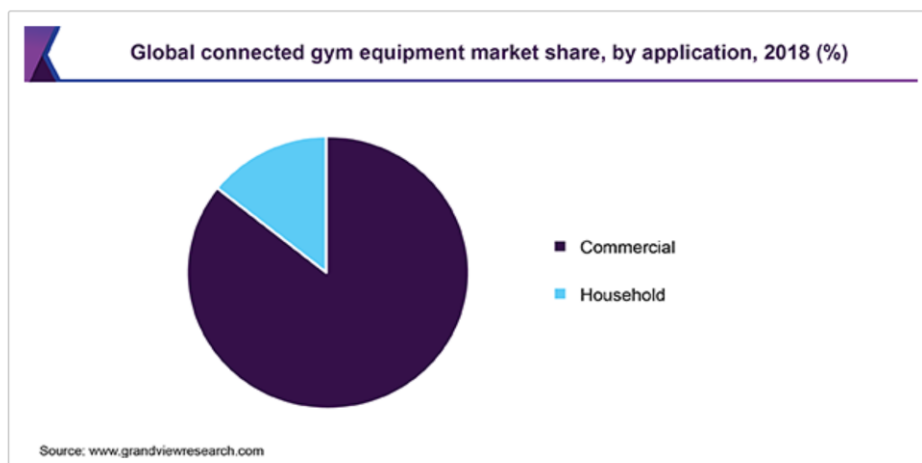


Image Source: Connected Gym Equipment Market Analysis Report by Product (Strength Training, Cardiovascular Training), By Application (Household, Commercial), By Region, And Segment Forecasts, 2019 - 2025

The home gym equipment market is quite fragmented and highly competitive. The industry has a slew of traditional gym equipment manufactures like NordicTrack, ProForm, Inspire, Rogue, Life Fitness, Precor, Icon Health and Fitness, Cybex, True Fitness, Octane, Star Trac, StairMaster etc. [11][12]

Icon Health & Fitness, Inc.
\$1,205.93M | United States

H.F. Holdings, Inc.
\$1,205.93M | United States

Nautilus, Inc.
\$309.29M | United States

Cybex International, Inc.
\$175.00M | United States

Precor Incorporated
\$173.39M | United States

Northern Lights Fitness Products Incorporated
\$26.09M | Canada

Tuffstuff Fitness International, Inc.
\$21.76M | United States

Rudong County Mingyang Machinery Factory
\$20.90M | China

Med-Fit Systems, Inc.
\$20.74M | United States

U.S.A. Sports, Inc.
\$20.51M | United States

American Barbell, LLC
\$20.00M | United States

Keiser Corporation
\$19.71M | United States

ACME INTRALOG FZCO
\$19.29M | United Arab Emirates

Nustep, LLC
\$18.70M | United States

Centre De Conditionnement Physique Atlantis Inc.
\$17.94M | Canada

Jiashan Weilong Healthy Equipment Co.,Ltd.
\$17.54M | China

Iron Grip Barbell Company, Inc.
\$15.86M | United States

Shandong Relax Health Industry Co., Ltd.
\$15.86M | China

Romfab
\$14.40M | United States

Xianghe County Tongda Casting Co., Ltd.
\$13.95M | China

Vectra Fitness, Inc.
\$13.85M | United States

Nantong Yigeng Physical Training Articles Co., Ltd.
\$13.55M | China

Shandong Huikang Sports Equipment Co., Ltd.
\$12.76M | China

Rudong Tianli Fitness Equipment Co., Ltd.
\$12.17M | China

Hoist Fitness Systems, Inc.
\$12.07M | United States

York Barbell Co. Ltd
\$10.94M | Canada

Woodway Usa, Inc.
\$10.25M | United States

Image: Top Fitness Equipment Manufacturing Companies (with annual revenue for 2020) Source: Reference [14]

Traditional home gym equipment ranges from small and inexpensive equipment like free weights, barbells, dumbbells, kettlebells, bench, resistance bands, exercise ball, bosu, pull up bar etc. to more expensive connected equipment like treadmills, exercise bikes, elliptical machines, rowing machine etc.^[13] The connected traditional gym equipment enables users to access workouts and session data. These devices can connect to the internet and offer a limited set of preloaded guided workouts. Treadmill and free weights are the most popular gym equipment in this segment and the share of these equipment continue to rise. Appendix F has some data on the increase in sales of traditional gym equipment in 2020.

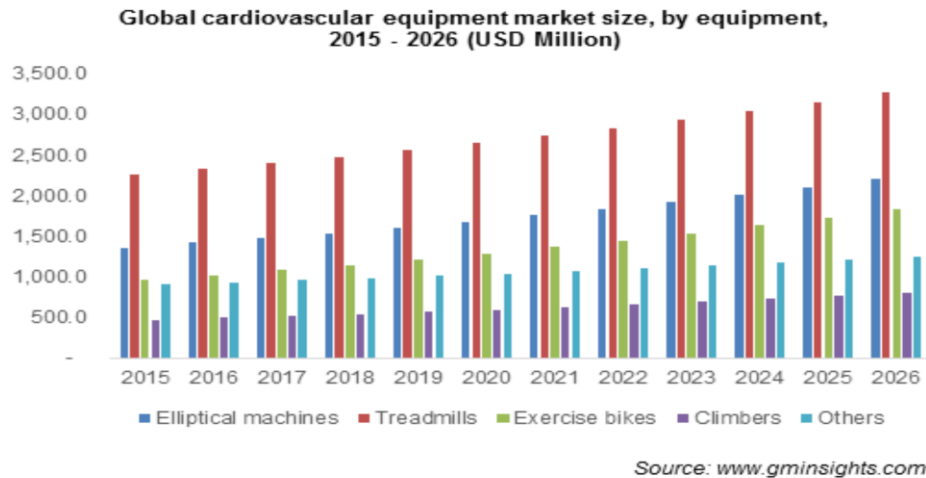


Image: gminsights website

Figure 1

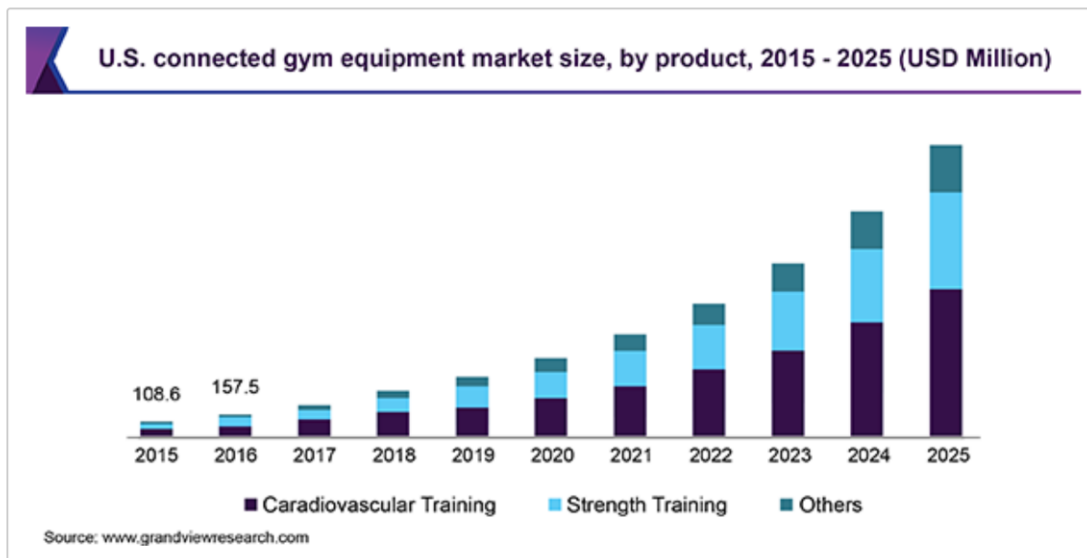


Image: grandviewresearch website

Figure 2

The high technology gym equipment industry promises to bring convenience, personalization, and the community of studio classes to users' home. The share of high

technology home gym equipment segment is steadily rising by data by different sources as shown in figure [1] and [2]. The following segment would look at the recent high technology home gym equipment that compete in the same segment as Mirror.

Tempo

The tempo is a home gym system that comes with a tempo machine with 42" display and storage cabinet, premium weight set, barbells, dumbbells, exercise mat and heart rate monitor. The tempo machine has touchscreen, camera, 3D sensors, speakers, and AI guidance system. Tempo competes directly with Mirror with a similar product. It claims to help users perfect their technique with personalized feedback. Tempo has a database of over 1 million 3D tagged workouts, from hundreds of gyms, overseen by thousands of trainers that forms the basis of the artificial intelligence.^[19] Tempo costs \$1,995 and offers interest free financing options. The tempo subscription costs \$39/month for hundreds of classes with personalized guidance. Tempo's hardware has a few glitches, but it is getting positive reviews for its 3D sensors and AI system.



Image: New york magazine

Tonal

The Tonal markets itself as the intelligent strength training machine. It has a patented digital weights system that delivers a smooth weightlifting experience using electricity and magnets. Tonal can deliver 200 pounds of resistance in a device smaller than a flatscreen TV.^[24] The equipment has a 24" touchscreen display, integrated Apple Music and has intelligence built in to help set weights and goals for the user while enabling them to monitor and track progress with a phone application and competes directly with the Mirror.

The Tonal retails at \$2,995 and provides interest free financing option. They also offer premium membership at \$49/month and an accessories package at \$495. Tonal has an intelligent "spotter mode" that detects fatigue and adjusts weights automatically. Along with Tempo it is one of the best at-home "smart" options for resistance training.^[17]

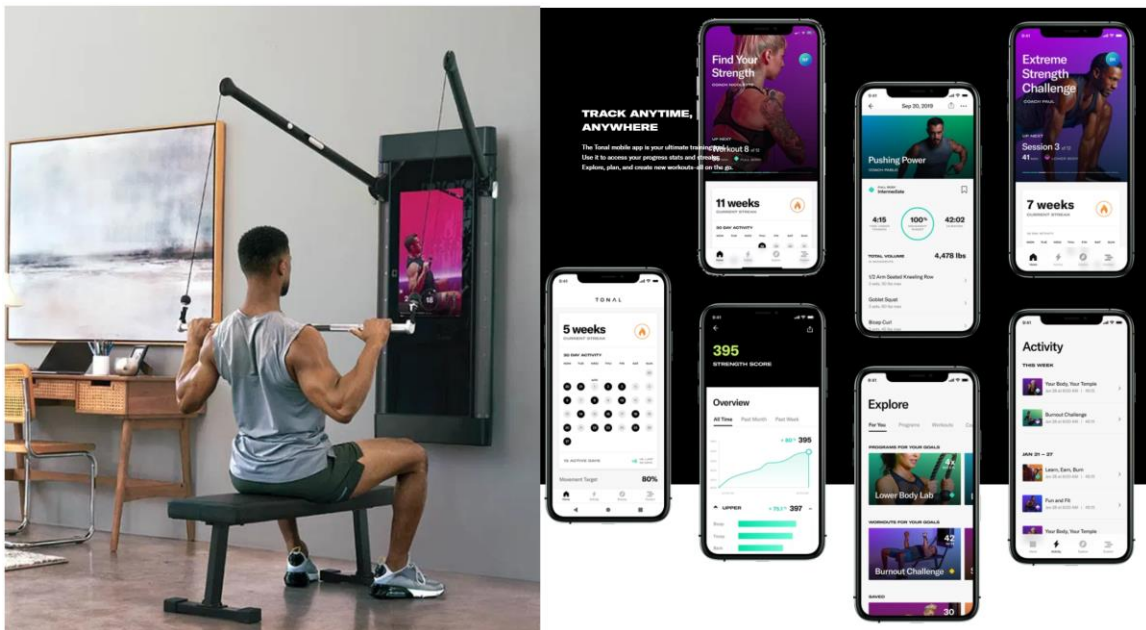


Image: Tonal Website

NordicTrack

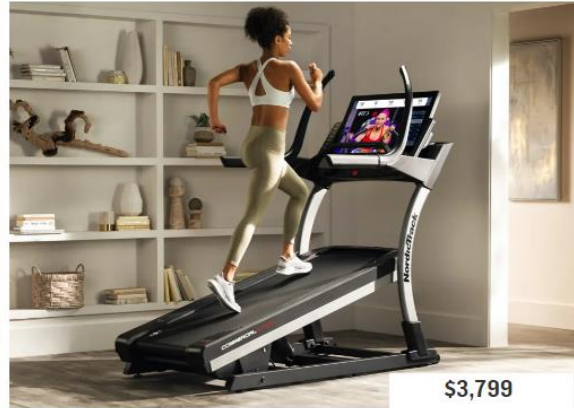
NordicTrack is an incumbent gym equipment provider that responded to the shift in home gym products with a slew of new connected high technology equipment with live workout sessions with trainers. For the purposes of this paper we will look at 3 of the latest offerings.

In the traditional segments that can either be used in a commercial or a home gym, NordicTrack introduced the following 2 products.

1. Fusion CST, a high intensity strength training device with a 10" screen tablet
2. Treadmills [Commercial X22i/X32i] with 22" inches or 32" screen tablet.

Both these devices come with integrated speakers, and interactive training capabilities through their "iFit" application which also gives ability for users to assess data and monitor progress. The workout library is accessible on phone application as well as the

device. With Fusion CST, the device provided live 1:1 strength training with a trainer through the iFit application and competes directly with Tonal. The devices are priced on the higher end of the price range and provide the brand name and traditional sales channels for the products even in the commercial gym spaces.



Commercial X32i Incline Treadmill

\$3,799

iFit Workout Rating¹
★★★★★ 4.8 (4.7K)

Fusion CST

\$1,899

OR

\$49 /MO*

0% APR for 39 mos
with TD Fit Loan


[SEE DETAILS](#)



Images: NordicTrack website

The other solution that competes directly with Mirror is the latest offering is Vault. The Vault provides a premier home gym that intimately pairs iFit interactive training with innovative reflective technology.^[49] The vault has a 61.5" touchscreen mirror that provides immediate visual feedback to the user to help match form of the trainer throughout the workout. The iFit application offers all categories of workout that a user can follow along in their own home and replicate an in-studio experience in their own home gym. The vault comes in 2 flavors: standalone and complete. The standalone comes with the mirror and the standard storage in the device for gym gear. The complete model comes with a variety of weights, dumbbells, kettlebells, resistance bands, yoga mat, yoga blocks and stretch straps. The Vault is very competitively priced with 1-year membership included in the retail price of the device.

iFIT > 1-Year iFit Family Membership Included (\$396 value)*



VAULT: COMPLETE

\$2,999
+ \$199 Threshold Delivery

OR


\$82 /MO^A
0% APR for 39 mos with TD Fit Loan
[SEE DETAILS](#)

PRE-ORDER NOW

PRE-ORDER NOW, SHIPS MAY 31ST, 2021

INCLUDES

- 1-Year iFit® Membership Included (\$468 Value)**
- Exercise Mats
- 2 Yoga Blocks
- 3 Loop Bands
- 3 Super Resistance Bands⁴
- 5-30 Lb Dumbbells
- 20 Lb & 30 Lb Kettlebells
- Premium Shelves
- Hanging Shelves
- Cleaning Towel



VAULT: STANDALONE

\$1,999
+ \$199 Threshold Delivery

OR

\$57 /MO^A
0% APR for 39 mos with TD Fit Loan
[SEE DETAILS](#)

PRE-ORDER NOW

PRE-ORDER NOW, SHIPS MARCH 12TH, 2021

INCLUDES

- 1-Year iFit® Membership Included (\$468 Value)**
- Hanging Shelves
- Cleaning Towel

^A Subject to credit approval. Estimated monthly payment amount excludes taxes. TD Fit Loans are issued by TD Bank, N.A.

Image: NordicTrack website

Hydrow Rower

Hydrow is an adjustable resistance level rower with 22" touchscreen with prerecorded workout. Hydrow re-engineered the rowing machine with their patented technology to make it more like rowing on water and built an immersive experience around it.^[26] Along with rowing workout, the subscription gives customers access to hundreds of on-demand and live classes at \$38/month. The New York magazine rates Hydrow highly for having great visual experience of all devices: Instead of watching an instructor in a blank space or inside a studio, they're all out on the open water.^[17]

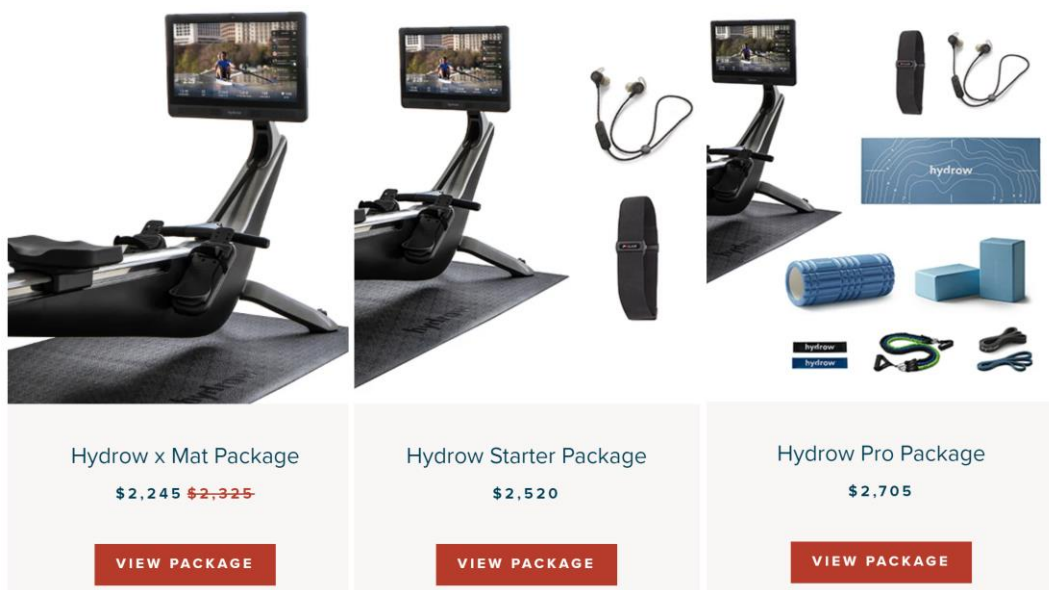


Image: Hydrow website

Ergatta

Ergatta is a rower designed with beauty and space consideration in mind. The machine is made with cherrywood by WaterRower and has a 17" visual display on an arm for interactive workouts. The Ergatta starts at \$2,199 and has a monthly subscription for workouts at \$29/month.

Ergatta differentiates itself from others in the segment by providing gaming-inspired content experience during the workouts instead of a traditional coach guiding and motivating the user. They have 4 different workout modes: push programs, interval workouts, race workouts and open row with different focus. Their artificial intelligence uses the user data to create challenges, workout structures and provides real-time feedback. It creates a community that motivates and challenges the users to grow and engage in group fitness activities.



Image: Ergatta website

FightCamp Gym

The FightCamp gym equipment provides the user shadowboxing style workout. The FightCamp gym equipment consists of a free-standing punching bag, a smart punch tracker to estimate punch speed and count the number of punches. The application is used to deliver the workout that users can view on their iPhone, iPad, or Apple TV. The application allows users to set goals, monitor progress, and allows user to choose a trainer that inspires them.

FIGHTCAMP PERSONAL

Everything You Need to Hit Your Goals

- Punch Trackers
- Quick Wraps
- Free-Standing Bag
- Heavy Workout Mat
- Premium Boxing Gloves
- ~~Additional Premium Boxing Gloves~~
- ~~Additional Quick Wraps~~
- ~~Kids Boxing Gloves~~

As Low As ①

\$51/mo

For 24 Months

OR

One-Time Payment

\$1219

FIGHTCAMP TRIBE Popular

Perfect for Households Who Are Stronger Together

- Punch Trackers
- Quick Wraps
- Free-Standing Bag
- Heavy Workout Mat
- Premium Boxing Gloves
- Additional Premium Boxing Gloves
- Additional Quick Wraps
- Kids Boxing Gloves

As Low As ①

\$56/mo

For 24 Months

OR

One-Time Payment

\$1349

FIGHTCAMP CONNECT

Perfect for Boxers Who Crave Next-Level Training

- Punch Trackers
- Quick Wraps
- ~~Free-Standing Bag~~
- ~~Heavy Workout Mat~~
- ~~Premium Boxing Gloves~~
- ~~Additional Premium Boxing Gloves~~
- ~~Additional Quick Wraps~~
- ~~Kids Boxing Gloves~~

As Low As ①

\$37/mo

For 12 Months

OR

One-Time Payment

\$439

Image: FightCamp website

JaxJox Kettlebell Connect

The JAXJOX KettlebellConnect™2.0 is a six-in-one digital adjustable kettlebell ranging from 12-42 lbs. that retails at \$229. It pairs with a phone application to track reps, volume, sets, average power, and workout duration. It provides real-time performance tracking and reporting. It provides on-demand workout classes and personalized Fitness tracking for a premium membership at \$12.99/month.[23]

JaxJox Kettlebell Connect

\$229

Image: JaxJox website

Peloton

Peloton is leading the high technology home gym equipment segment with its products estimated to earn \$1.8 billion in sales in 2020.^[22] Its most popular product is the smart exercise bikes that bring the competition and camaraderie of studio cycling classes to a user's home. Peloton Bike is a high-end indoor bike with a Wi-Fi-enabled, 21.5-inch touchscreen tablet that streams live and on-demand classes. Peloton is a highly successful gym equipment with devoted following. Peloton had more than 4.4 million total members and a 12-month retention rate of 92%.^[21] The peloton is sleek, well designed, smooth to peddle, quiet and sensitive to calibration. Peloton's biggest selling point is their large selection of live classes by renowned instructors. Peloton bikes start at \$1,895 and offer interest free financing. A monthly subscription fee of \$39 is required to access the online workout library and live sessions. After the success of the bikes, Peloton is also introducing treadmills to bring similar experience to runners.





			
BIKE BASICS	BIKE ESSENTIALS	BIKE WORKS	BIKE FAMILY
\$1,895	\$2,045	\$2,145	\$2,345
Includes delivery and assembly	Includes delivery and assembly	Includes delivery and assembly	Includes delivery and assembly
As low as \$49/month for 39 months at 0% APR.	As low as \$53/month for 39 months at 0% APR.	As low as \$55/month for 39 months at 0% APR.	As low as \$61/month for 39 months at 0% APR.
Prequalify Now	Prequalify Now	Prequalify Now	Prequalify Now

Image: Peloton website



Peloton Tread+

From \$4,295

Image: Peloton website

Pro-form

Pro-form has introduced a new bike at a slightly lower price point than Peloton with integrated iFit membership family membership. The exercise studio bike has a 22"

touchscreen, comes with interactive training sessions, ability to stream studio class workouts and ability to store and assess workout session data. The tablet can swivel and can be used as the interactive touchscreen to follow along on workouts that do not involve an exercise bike. The Pro-Form is adjustable for different heights, is super quiet and easy to roll around. The Pro-form studio bike comes with a set of 3 lbs. dumbbell for incorporating in upper body strength workouts. Users can also buy their SmartBeat™ Forearm Heart Rate Monitor that can easily sync to the ProForm Studio Bike to give you a continuous heart rate reading on the screen.^[49]



Image: Pro-Form Website

Porter's Five Forces

Porter's five forces help in analysis of competitive forces acting in the industry. This section performs an analysis of the porter's five forces in the high technology home gym equipment market.

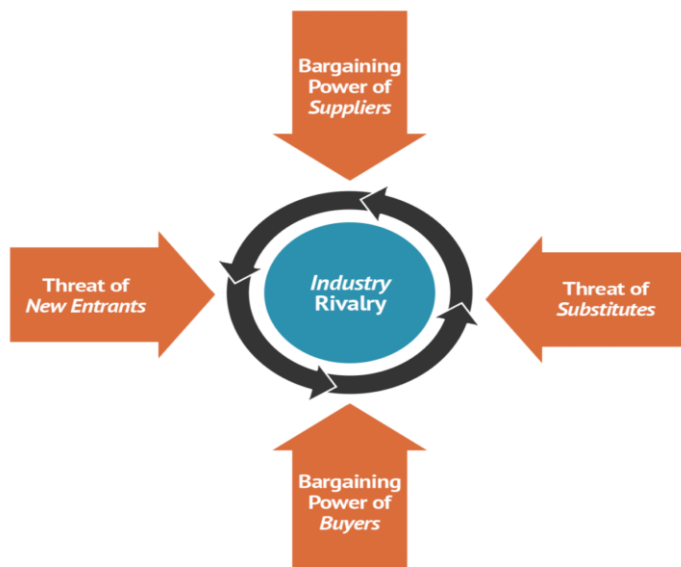


Image: targetinternet website

Power of Buyers

Since the high technology home gym equipment market has many players, the buyers have a wide variety of options to select for their fitness needs. There are various manufacturers and a variety of equipment that help users achieve their personal fitness goals. High technology equipment is expensive with high switching costs creating a customer lock-in. Most high technology equipment also has complimentary applications that record workout session data which isn't easily portable from one application to another leading to switching barrier for customers. Most of the high technology equipment manufacturers supply hardware/equipment, provide applications to read, write and visualize data, provide application with integrated music and health tracking features creating vertically integrated platforms. All high technology home gym equipment providers have multiple styles, lengths and intensity of workouts providing enough variety in all you can consume format in trying to maximize utility. Based on these, I will rate power of buyers in this industry as *low*.

Power of Suppliers

High technology gym equipment uses a wide variety of hardware components like computer chips, touchscreens, Wi-Fi module, integrated speakers, camera, etc. and software components and intelligence build into the system. The coaches/instructors are another important supplier that help generates value for the product with the workouts.

There are multiple suppliers of the hardware components as well as a fair number of coaches/instructors. Also, the online library with recorded workout sessions generates multiple value add sessions for users. Based on these factors, I would rate power of suppliers in this industry as *low*.

Threat of new entrant

Threat of a new entrant is a combination of access to the resources needed to enter or compete in a market along with the capabilities needed to generate value for the customers by either business process or constituents of the product or experience. As discussed above there are multiple suppliers for both the hardware components as well as instructors and coaches that can engage the users with recorded or live sessions. This makes it relatively easy for a new entrant to enter the market thus making the threat of new entrant in the industry as *high*.

Threat of substitution

Physical activity is one of the earliest activity humans have engaged in. There are multiple ways of engaging in physical activity like running, swimming, kayaking, paddling, etc. that an individual can engage in outdoors or traditional class/sessions like karate, boxing, dancing, HIIT workout, yoga etc., or a traditional gym equipment like treadmill, lifting, personal training etc. The home gym equipment industry is thus competing in a segment with lot of substitutes making the treat of substitution *high*.

Intensity of competitive rivalry

The high technology home gym market has many competitors with the ability and resources to compete to capture market share. The market sees numerous new products, services and models that have potential to become social phenomenon. At this time the market is seeing an influx of home gym equipment as COVID-19 pandemic pushed users out from studio classes to in-home gyms.

Before this current wave there were a slew of studios opening centers in all major US cities like Orange Theory, SoulCycle, Pilates studios, Barre, yoga studio, etc. Alongside these new studios were the traditional gyms at different price points with variety of services. Based on the history and evolution of the industry, I would rate intensity of competitive rivalry as *high* with potential to earn high returns by creating a highly engaged community.

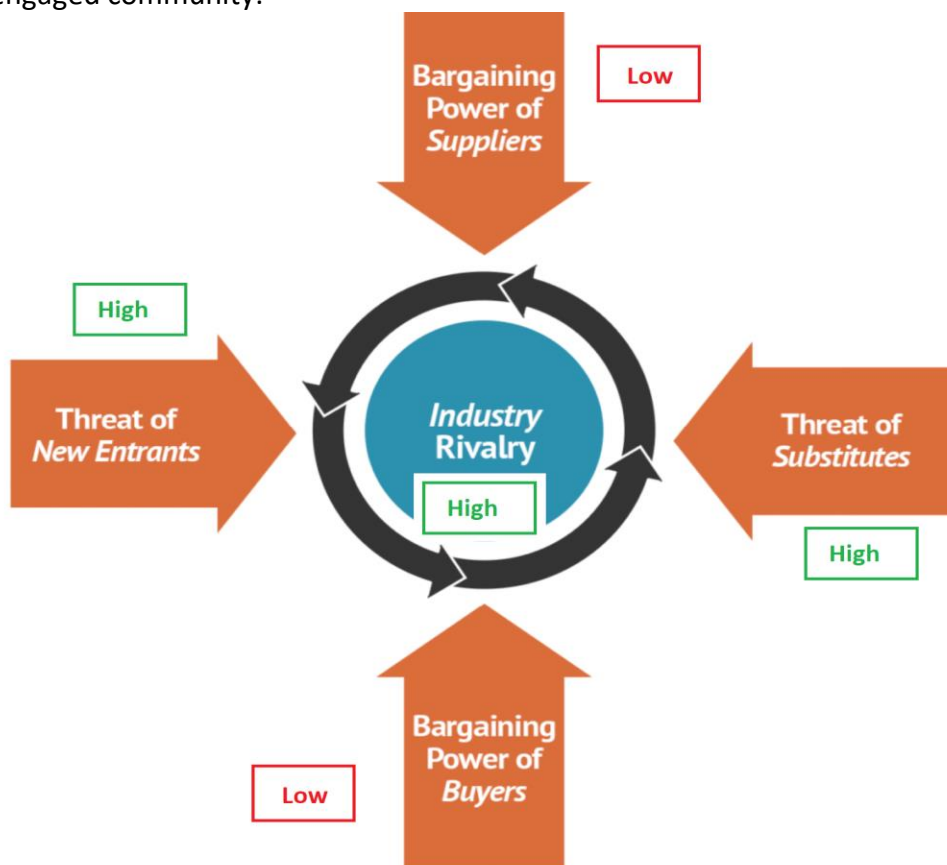


Figure 3: Porter's five forces in high technology home gym equipment market segment

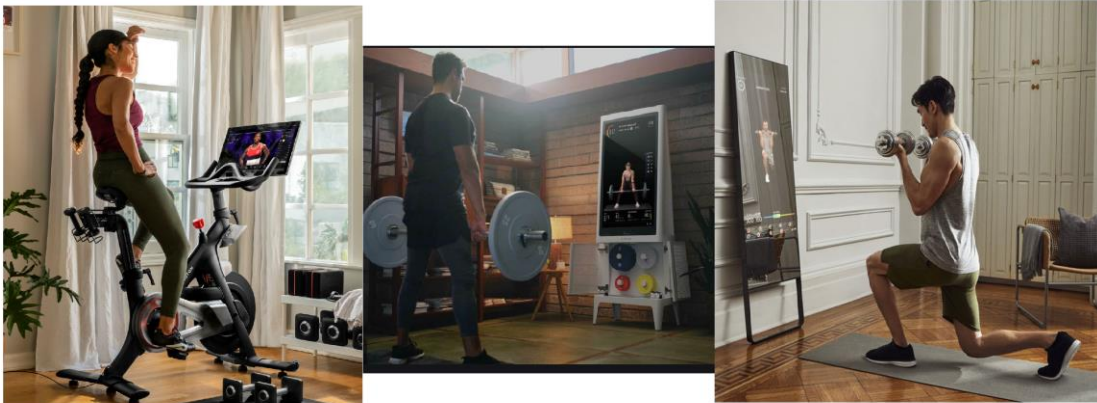
Conclusion

Mirror is competing in a highly competitive industry segment with lot of incumbents and new entrants. The product is gaining traction in market with celebrity endorsement, press and interviews. The product is receiving positive reviews and has scope for improvements. Being bought by Lululemon gives Mirror access to both

customers and capital. Mirror tries to target the same segment as Lululemon and thus can leverage Lululemon's stores to reach the customers and help in product discovery. Mirror can also leverage Lululemon's partnerships to continue getting the product in front of customers building on its strategy to put it in studios and hotel suites.

They had the advantage of having an entrepreneur who had experience in fitness industry and had previously created a successful business in similar industry segment. Brynn Putnam's vision for the product is more than just an exercise equipment, she wants it to be the third screen in a home alongside phones and televisions. Mirror is marketed as an immersive, interactive experience where you're doing instead of watching thus needing a dedicated device to consume content in a different format. The vision for the product is to be a broader wellness device with integration to fitness, healthcare, socializing and shopping.

The other products that directly compete with Mirror are Tempo and Vault. Tempo has a proprietary 3D sensor technology that also shows potential to integrate into physical therapy and health care. The Vault has the full screen interactive touchscreen and brand name and recognition. NordicTrack also has the advantage of having seasoned supplychain and sales channels and can be tough competitor. Both Vault and Tempo come with a set of equipments that the user can employ in different types of workouts and make the equipments more attractive to users due to included equipments.



Images: Mirror, Tempo and Peloton websites

On the side of substitutes, Peloton has a dominant market position as well as a vibrant community that is built around its products. They have pioneered the workout and community aspect with engaged online sessions with DJ. They are already making a move into treadmills and can pivot into the same space as Mirror.

In terms of resources, the pandemic has highlighted the vulnerabilities in the just-in-time manufacturing approach. Most companies are rethinking their supply chains to make them more reliable and robust. Mirror would also benefit from determining the right inventory its manufacturers are required to maintain.

Recently, there is more demand for chips than the semiconductor industry has been able to keep up with. As a result of pandemic, semiconductor manufacturing industry, like most industries, experienced manufacturing declines. As safety protocols for workers were put into place, most plants got to their original output levels within a few months. However, there is still backlog of orders that needed to be filled.^[50] This can impact high technology home gym equipment company by creating supply side shortage. During this time, well established supply chain channels can provide competitive advantage to the high technology home gym equipment manufacturer.

References

- [1] Home gym equipment market forecast 2020-2025
https://www.reportlinker.com/p05982535/?utm_source=GNW
- [2] Nutrition, Physical Activity, and Obesity: Data, Trends and Maps
https://nccd.cdc.gov/dnpao_dtm/rdPage.aspx?rdReport=DNPAO_DTM.ExploreByLocation&rdRequestForwarding=Form
- [3] CDC data and statistics
<https://www.cdc.gov/physicalactivity/data/index.html>
- [4] 2018 Physical Activity guidelines advisory committee scientific report
<https://health.gov/our-work/physical-activity/current-guidelines/scientific-report>
- [5] Tips for choosing the right exercise equipment
<https://www.health.harvard.edu/healthbeat/tips-for-choosing-the-right-exercise-equipment>
- [6] Global Home Fitness Equipment Market
<https://www.technavio.com/report/home-fitness-equipment-market-industry-analysis>
- [7] Mirror Website: <https://www.mirror.co/>
- [8] The Evolution of Fitness Equipment
<https://www.athleticbusiness.com/fitness-training/the-evolution-of-fitness-equipment.html>
- [9] Lululemon to acquire at-home fitness company Mirror for \$500 million
<https://www.cnn.com/2020/06/29/lululemon-to-acquire-at-home-fitness-company-mirror-for-500-million.html>
- [10] The Most Narcissistic Exercise Equipment Ever
<https://www.nytimes.com/2019/02/08/style/mirror-fitness-method.html>
- [11] Top Fitness and Gym Equipment Manufacturers and Suppliers
<https://www.thomasnet.com/articles/top-suppliers/fitness-and-gym-equipment-manufacturers-and-suppliers/>
- [12] Specialty Fitness Equipment
<https://www.specialtyfitnessequipment.com/fitness-equipment/manufacturers>
- [13] Best home gym equipment in 2021

<https://www.tomsguide.com/best-picks/best-home-gym-equipment>

[14] Fitness Equipment Manufacturing Industry Insights From D&B Hoovers

<https://www.dnb.com/business-directory/industry-analysis.fitness-equipment-manufacturing.html>

[15] Lululemon Buys Mirror, an At-Home Fitness Startup, for \$500 Million

<https://www.wsj.com/articles/lululemon-to-buy-at-home-fitness-company-mirror-for-500-million-11593465981>

[16] Connected Gym Equipment Market Analysis Report By Product (Strength Training, Cardiovascular Training), By Application (Household, Commercial), By Region, And Segment Forecasts, 2019 – 2025

<https://www.grandviewresearch.com/industry-analysis/connected-gym-equipment-market>

[17] I Tried Several ‘Smart’ Fitness Machines (and Mirror) to Find Out What’s Worth It (Karen Iorio Adelson, Nov. 2020)

<https://nymag.com/strategist/article/smart-home-gym-equipment-mirror-tonal-peloton-review.html>

[18] Tempo website: <https://tempo.fit/>

[19] Tempo reveals \$17M-funded \$2000 weight lift training screen

<https://techcrunch.com/2020/02/26/tempo-weight-lifting-screen/>

[20] Peloton website: <https://www.onepeloton.com/>

[21] Peloton Review: What to Know Before You Buy

<https://www.nytimes.com/wirecutter/reviews/peloton-review-what-to-know-before-you-buy/>

[22] Peloton Sales Double During Pandemic:

<https://www.statista.com/chart/22836/peloton-annual-sales/>

[23] JaxJox kettlebell website: <https://jaxjox.com/product/kettlebell-connect/>

[24] Tonal website: <https://www.tonal.com/equipment/>

[25] Americans bulk up on home gym equipment to stay fit while staying at home

<https://www.reuters.com/article/us-health-coronavirus-fitness-equipment/americans-bulk-up-on-home-gym-equipment-to-stay-fit-while-staying-at-home-idUSKBN22Q3OM>

[26] Hydrow rower website: <https://hydrow.com/the-hydrow/>

[27] Ergatta website: <https://ergatta.com/the-ergatta-rower/>

[28] FightCamp Gym website: <https://joinfightcamp.com/>

[29] Mirror founder Brynn Putnam on the importance of fitness during tough times

<https://www.today.com/tmrw/mirror-s-brynn-putnam-prioritizing-fitness-self-care-t199774>

[30] What makes Mirror’s Brynn Putnam an exceptional founder

<https://medium.com/thoughts-from-primary-venture-partners/what-makes-mirrors-brynn-putnam-an-exceptional-founder-36549d5b208e>

[31] Meet Brynn Putnam, the Harvard-educated former ballerina whose fitness screen Mirror has transformed the at-home workout industry

<https://www.insider.com/luminaries-brynn-putnam-mirror-lululemon-2020-10>

[32] Mirror founder Brynn Putnam on life with lululemon and whether or not she sold too soon

<https://www.insider.com/luminaries-brynn-putnam-mirror-lululemon-2020-10>

[33] Home gym startup Mirror worth almost \$300M after new funding

<https://www.builtinnyc.com/2019/06/04/mirror-36M-funding-300M-valuation>

[34] Mirror review: This \$1,500 Peloton rival is practical, but imperfect

<https://www.tomsguide.com/us/mirror-home-gym,review-6499.html>

[35] How a former ballerina turned mirror into a buzzy \$399 million exercise phenomenon

<https://www.forbes.com/sites/amyfeldman/2020/05/28/how-a-former-ballerina-turned-mirror-into-a-buzzy-300-million-exercise-phenomenon/?sh=7709eb004566>

[36] The best smart home gym workouts of 2021: Peloton, Mirror, Tempo and more

<https://www.cnet.com/health/best-smart-home-gym-workouts-of-2021-peloton-mirror-tempo-and-more/>

[37] U.S. Home Gym Equipment Market Study 2020: Rise of Connected Fitness, Increasing Social Media Influence

<https://finance.yahoo.com/news/u-home-gym-equipment-market-162300349.html>

[38] Lululemon is buying Mirror, the startup that sells a \$1,500 high-tech mirror for streaming workout classes at home, for \$500 million

<https://www.businessinsider.com/lululemon-buys-mirror-fitness-startup-500-million-at-home-workouts-2020-6>

[39] Mirror Wanted to Be the Next iPhone. Instead, It's Selling to Lululemon.

<https://marker.medium.com/mirror-wanted-to-be-the-next-iphone-instead-its-selling-to-lululemon-2dc2ebe65431>

[40] IS A PELOTON WORTH IT? AN ENGINEERING PROFESSOR WEIGHS IN ON THE CRAZE

<https://news.virginia.edu/content/peloton-worth-it-engineering-professor-weighs-craze>

[41] The pandemic's home-workout revolution may be here to stay

<https://www.washingtonpost.com/road-to-recovery/2021/01/07/home-fitness-boom/>

[42] Fitness Equipment Market Statistics | Global Report 2026

<https://www.gminsights.com/industry-analysis/fitness-equipment-market-report>

[43] HOME FITNESS EQUIPMENT MARKET - GROWTH, TRENDS, COVID-19 IMPACT, AND FORECASTS (2021 - 2026)

<https://www.mordorintelligence.com/industry-reports/home-fitness-equipment-market>

[44] 11 Companies Excelling in the Home Fitness Market

<https://www.glofox.com/blog/11-companies-succeeding-in-the-home-fitness-market/>

[45] Home Gym Equipment Market Size to Reach Revenues of around USD 31 Billion by 2025 - Arizton

<https://www.prnewswire.com/news-releases/home-gym-equipment-market-size-to-reach-revenues-of-around-usd-31-billion-by-2025--arizton-301161796.html>

[46] Global Home Fitness Equipment Market Report (2020 to 2030) - COVID-19 Implications and Growth - ResearchAndMarkets.com

<https://www.businesswire.com/news/home/20210104005383/en/Global-Home-Fitness-Equipment-Market-Report-2020-to-2030---COVID-19-Implications-and-Growth--ResearchAndMarkets.com>

[47] Virtual/Online Fitness Market Size & Share | Global Report 2026

<https://www.gminsights.com/industry-analysis/virtual-online-fitness-market>

[48] NordicTrack website: <https://www.nordictrack.com/> and

<https://www.nordictrack.com/vault>

[49] Pro-form website: <https://www.proform.com/exercise-bikes/studio-bike-pro-22>

[50] A Silicon Chip Shortage May Delay Headphones and Game Consoles, but Don't Panic

<https://www.nytimes.com/wirecutter/blog/silicon-chip-shortage-delays/>

Appendices

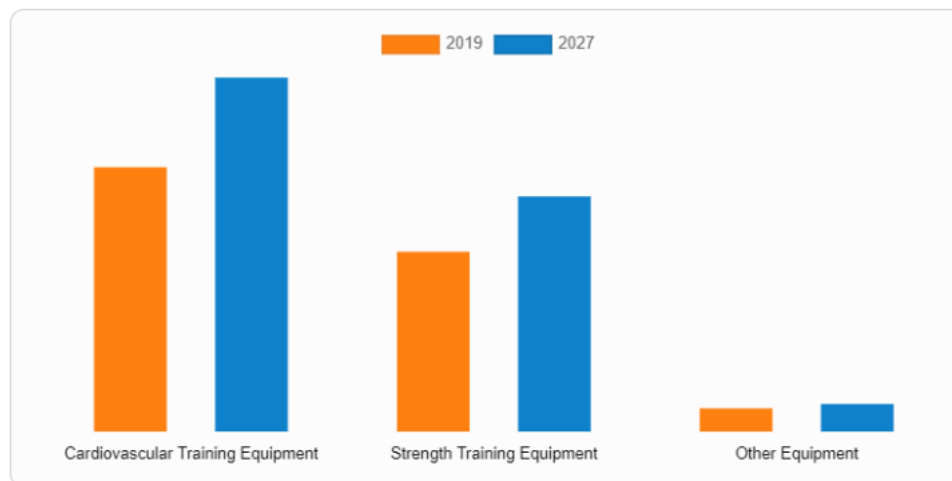
Appendix A: Global home fitness equipment market report [2020-2024]



Source: Technavio

Fitness Equipment Market

By Type



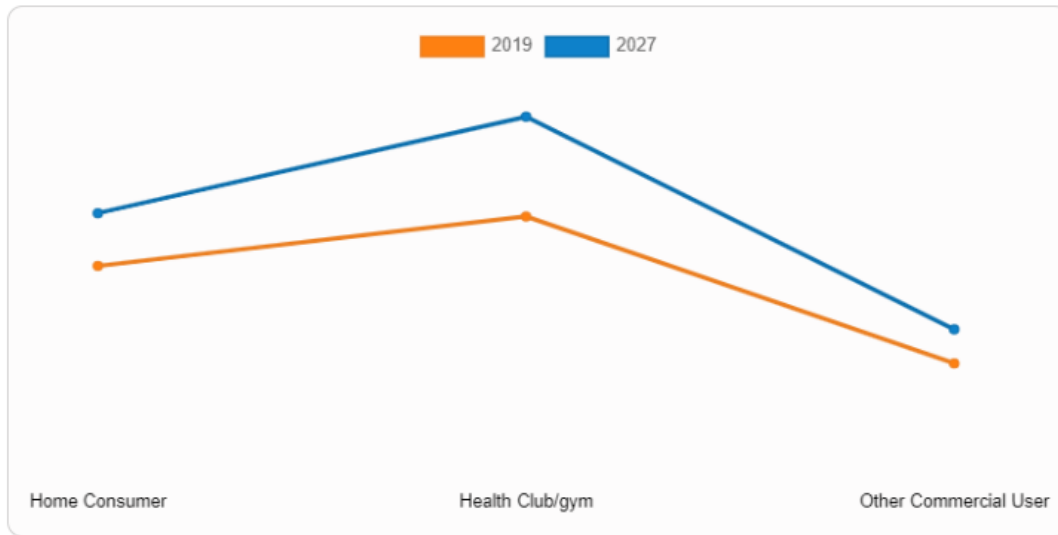
Cardiovascular Training Equipment segment would exhibit the highest CAGR of 3.7% during 2020-2027.

Source: <https://www.alliedmarketresearch.com/fitness-equipment-market>

Most growth would come from home and club in Northern America.

Fitness Equipment Market

By End User



Health Club/Gym segment would exhibit the highest CAGR of 4.1% during 2020-2027.

Source: <https://www.alliedmarketresearch.com/fitness-equipment-market>

Appendix B: Global Interactive fitness market [2020-2024]

GLOBAL INTERACTIVE FITNESS MARKET 2020-2024



Source: Technavio

Appendix C: CDC data on physical activity

2008 Physical Activity Guidelines for Americans

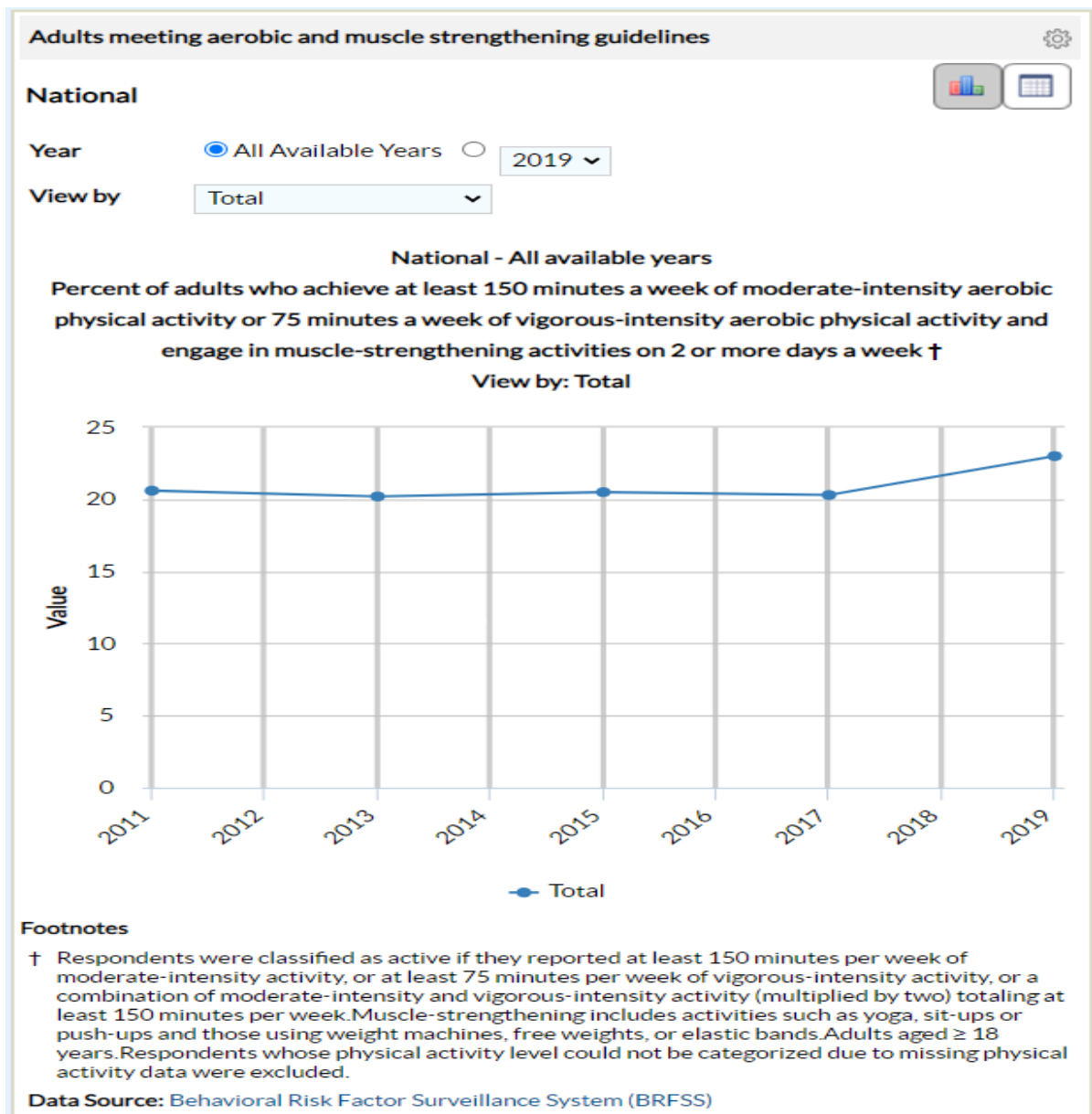


Trends in Meeting the 2008 Physical Activity Guidelines, 2008–2018 Percentage (95% Confidence Interval)												Period-Specific Trends*
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Overall Trend*	
Adults engaging in no leisure-time physical activity												
36.2 (35.0-37.4)	32.3 (31.3-33.3)	32.4 (31.5-33.3)	31.6 (30.7-32.5)	29.6 (28.8-30.5)	30.3 (29.5-31.1)	30.0 (29.1-30.9)	30.0 (29.2-30.9)	26.9 (25.7-28.1)	25.9 (24.6-27.2)	25.4 (24.3-26.6)	↓ 0.9/year	None
Adults meeting minimum aerobic physical activity guideline—Moderate-intensity for ≥ 150 minutes/week, or vigorous-intensity for ≥ 75 minutes/week, or an equivalent combination												
43.5 (42.4-44.6)	47.2 (46.2-48.2)	47.1 (46.2-48.0)	48.8 (47.9-49.7)	50.0 (49.1-50.8)	49.9 (49.1-50.8)	49.9 (49.0-50.8)	49.8 (48.9-50.6)	52.6 (51.5-53.7)	54.1 (52.9-55.2)	54.2 (53.2-55.3)	↑ 0.9/year	None
Adults meeting high aerobic physical activity guideline—Moderate-intensity for > 300 minutes/week, or vigorous-intensity for > 150 minutes/week, or an equivalent combination												
28.4 (27.5-29.4)	31.2 (30.4-32.1)	31.7 (30.9-32.5)	33.1 (32.4-34.0)	34.3 (33.5-35.1)	34.3 (33.5-35.2)	34.0 (33.2-34.9)	33.6 (32.7-34.4)	35.9 (34.9-36.9)	37.0 (36.0-38.1)	37.4 (36.4-38.4)	↑ 0.7/year	↑ 2008–2012 (1.3/year) ↔ 2012–2015 ↑ 2015–2018 (1.2/year)
Adults meeting muscle-strengthening guideline—Muscle-strengthening activities ≥ 2 days/week												
21.9 (21.2-22.7)	22.6 (21.8-23.3)	24.2 (23.4-24.9)	24.2 (23.5-24.9)	23.9 (23.2-24.5)	24.1 (23.4-24.9)	24.4 (23.7-25.2)	24.8 (24.2-25.5)	26.0 (25.1-26.9)	27.7 (26.8-28.6)	27.6 (26.8-28.5)	↑ 0.5/year	↑ 2008–2010 (1.1/year) ↔ 2010–2014 ↑ 2014–2018 (0.9/year)
Adults meeting guidelines for aerobic physical activity and muscle-strengthening activity												
18.2 (17.5-19.0)	19.0 (18.3-19.7)	20.6 (19.9-21.3)	20.8 (20.2-21.5)	20.6 (20.0-21.2)	20.8 (20.1-21.4)	21.3 (20.6-22.0)	21.4 (20.8-22.1)	22.5 (21.7-23.3)	24.3 (23.5-25.2)	24.0 (23.2-24.9)	↑ 0.5/year	None
Adolescents meeting aerobic physical activity guideline—Physically active ≥ 60 minutes per day on 7 days/week												
-	-	-	28.7 (27.1-30.3)	-	27.1 (25.5-28.8)	-	27.1 (25.4-28.8)	-	26.1 (24.1-28.3)	-	↔	None
Adolescents meeting guideline for muscle-strengthening activity—Muscle-strengthening activities on ≥ 3 days/week												
-	-	-	55.6 (53.6-57.5)	-	51.7 (49.6-53.9)	-	53.4 (51.1-55.6)	-	51.1 (47.5-54.7)	-	↔	None
Adolescents meeting guidelines for aerobic physical activity and muscle-strengthening activity												
-	-	-	21.9 (19.9-23.9)	-	21.6 (19.6-23.8)	-	20.5 (18.4-22.7)	-	20.0 (17.2-23.0)	-	↔	None

Adult estimates (18+ years) are based on data from the National Health Interview Survey (NHIS). Participation in moderate-intensity aerobic activity includes light- or moderate-intensity activities. Adult estimates are age adjusted to the projected 2000 US standard population using 5 age groups: 18–24, 25–34, 35–44, 45–64, and ≥65 years. Adolescent estimates (high school students) are based on data from the Youth Risk Behavior Surveillance System (YRBSS).

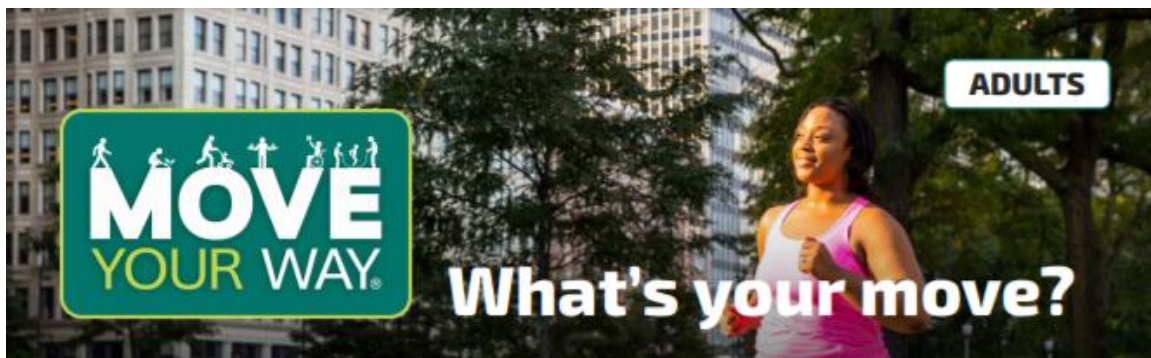
* Based on trend analyses using logistic regression models (adult models controlled for age). No significant or higher-order trends were identified for adolescents. For adults, significant linear and higher-order trends ($p < 0.05$) were present for all measures. When higher-order trends were present, the best-fitting model was identified using JoinPoint software. The average annual percentage point change is the slope of the linear trend line for the whole period or for segments identified in JoinPoint (high aerobic and muscle-strengthening guidelines).

Source: <https://www.cdc.gov/physicalactivity/downloads/trends-in-the-prevalence-of-physical-activity-508.pdf>



Source: <https://www.cdc.gov/nchs/fastats/exercise.htm>

Appendix D: Government flyer to promote physical activity



You know you need physical activity to stay healthy.
But did you know it can help you feel better right away?



Boost your mood



Sharpen your focus



Reduce your stress



Improve your sleep

So get more active — and start feeling better today.

How much activity do I need?

Moderate-intensity aerobic activity

Anything that gets your heart beating faster counts.



AND



Tight on time this week? **Start with just 5 minutes.** It all adds up!

Or get the same benefits in half the time. If you step it up to **vigorous-intensity** aerobic activity, aim for at least **75 minutes** a week.

Is it moderate or vigorous? Use the “talk test” to find out.

When you're being active, just try talking:

- If you're breathing hard but can still have a conversation easily, it's **moderate-intensity activity**
- If you can only say a few words before you have to take a breath, it's **vigorous-intensity activity**

What counts?

Whatever gets you moving!



Even things you have to do anyway



Even things that don't feel like exercise

You can get more active.

No matter who you are, where you live, on your own, or together.
You can find a way that works for you.



And over time, physical activity can help you live a longer, healthier life.

✓ Lower your risk of diseases like type 2 diabetes and some cancers

✓ Control your blood pressure

✓ Stay at a healthy weight

So take the first step. Get a little more active each day. **Move your way.**

Find tips to get moving and build a weekly activity plan.
health.gov/MoveYourWay/Activity-Planner



Source: <https://health.gov/our-work/physical-activity/move-your-way-campaign/campaign-materials/materials-adults>

Appendix E: Gym equipment manufacturer



Life Fitness



Precor Fitness Equipment



Cybex Fitness Equipment



Star Trac Exercise Equipment



Expresso Fitness



Lemond Fitness Equipment



FreeMotion Fitness Equipment



Stairmaster Fitness Equipment



TKO Fitness Equipment



Nautilus



Hammer Strength Fitness Equipment



Scifit Fitness Equipment



Muscle D



Ab Coaster



Keiser Fitness Equipment



Inflight Fitness



Total Gym Fitness Equipment



TrakFitness Equipment



Hampton Fitness



American Barbell

Source: <https://primofitnessusa.com/shop/brands/>

Appendix F: Increased Sales of home gym equipment in 2020

Equipment	Sales Increase 2019 v 2020
Dumbbells	1980%
Weight Plates	1355%
Kettlebells	1000%
Pull Up Bar	640%
Benches	530%
Barbells & Attachments	355%
Power Racks & Smith Machines	315%
Equipment Mats & Flooring	300%
Weight Storage	285%
Push Up Stands	200%

Source: <https://www.zdnet.com/article/how-much-gym-equipment-are-we-buying-right-now/>

Appendix G: Global market size of home fitness equipment



Source: <https://www.mordorintelligence.com/industry-reports/home-fitness-equipment-market>